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Olde et al.

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(54) **FILTERING OF A TIME-DEPENDENT PRESSURE SIGNAL**

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(57) **ABSTRACT**

A device removes first pulses in a pressure signal of a pressure sensor which is arranged in a fluid containing system to detect the first pulses, which originate from a first pulse generator, and second pulses, which originate from a second pulse generator. The first pulse generator operates in a sequence of pulse cycles, each pulse cycle resulting in at least one first pulse. The device repetitively obtains a current data sample, calculates a corresponding reference value and subtracts the reference value from the current data sample. The reference value is calculated as a function of other data sample(s) in the same pressure signal. The fluid containing system may include an extracorporeal blood flow circuit, e.g. as part of a dialysis machine, and a cardiovascular system of a human patient.

31 Claims, 8 Drawing Sheets